FORCEnet engineering conference

November 15 -17, 2005: Town & Country Convention Center - San Diego, CA

Architecture Governance and Data

CDR Patrick G. Roche, USN

Deputy, Architecture & Human Systems (052A)

15 Nov 05

DISTRO: Approved for public release; distribution is unlimited (8 NOVEMBER 2005)

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FORCEnet Chief Engineer

Purpose of FORCEnet Architecture

- **Architecture Data is Used to Describe**
  - What Exists Today (As-Is) Plus Planned/Programmed (To-Be)
  - What Should Exist in the Future (Target)
- **FORCEnet Integrated Architecture Data Supports the Entire Naval Enterprise:**
  - Capabilities
    - Warfighters
    - Resource Sponsors
  - Acquisition Community
    - Acquisition and Technology Managers
    - Solution Developers

Goal: Provide the Objective Data Needed to Support the Decision-Making Process

FORCEnet Integrated Architecture

- **Dec 03** - Sea Trial Instruction established NETWARCOM as Operational Agent for FORCEnet.
- **Feb 04** - NETWARCOM Deep Dive Action to plan for Operational View (OV) Development and Architecture Governance. Concept effort started.
- **May/Jun 04** - OV Plan and Architecture Governance presented at Deep Dive and Flag Summit.
- **Jul 04** - Monthly AV and OV Working Groups started.
- **Aug 04** - First Draft of AV-1 and Governance Document.
- **Sep 04** - Monthly SV Working Group started.
- **Feb 05** - FORCEnet Functional Concept signed by CNO/CMC.
- **Mar 05** – Monthly Integration Board started.
- **Apr/Jun/Aug/Oct 05** - Verification Boards.

Capability-Based Process

Naval Operating Concept for Joint Operations

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FORCEnet Functional Concept / Capabilities

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FORCEnet Functional Concept & Capability Addendum

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Operational Scenarios / Mission Threads

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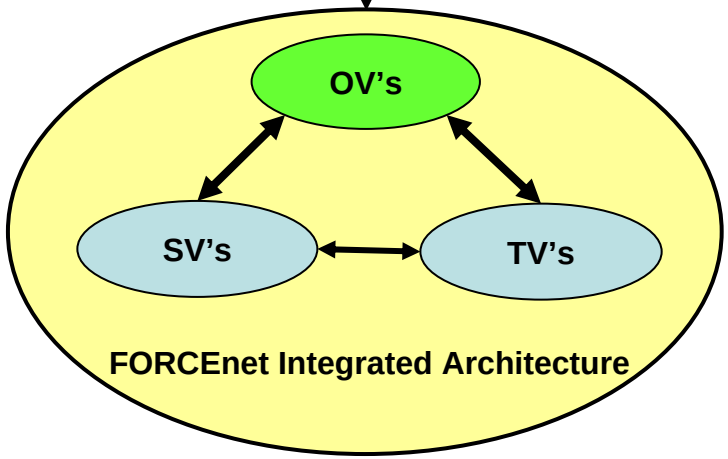


OV – Operational View

SV – System View

TV – Technical View

Operational View (OV) Process

FORCEnet Concept and Capabilities

Operational Scenarios/Mission Threads

- **Current Doctrine**
- **Mission Essential Tasks**
- **MCASE**

OV-1's

OV-2
OV-3
OV-4
OV-5

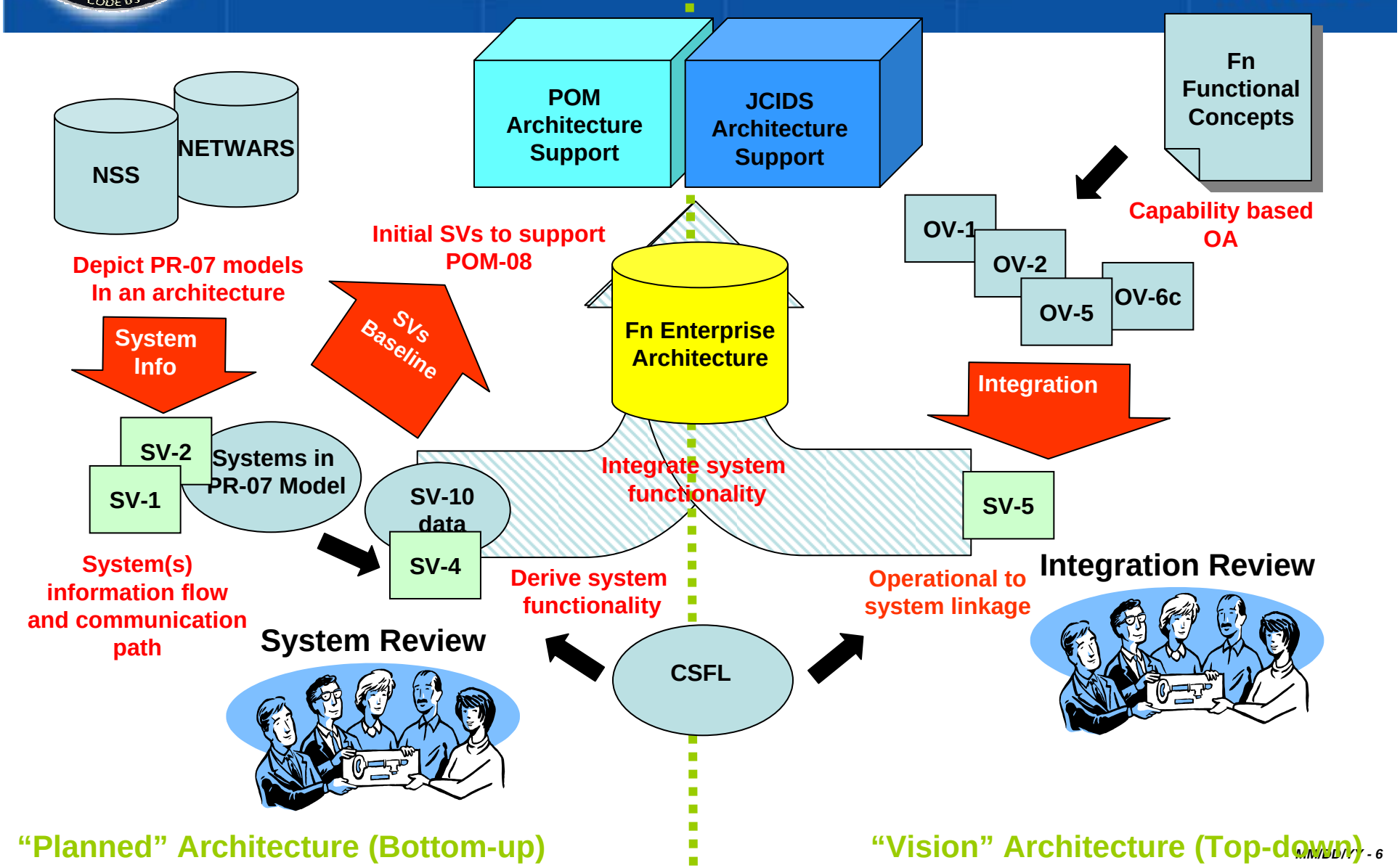
OV-6's

- FIT
- MCASE
- M&S Based Assessments
- SV / TV Development
- POR: ISPs, ICDs CDDs, CPDs
- Experimentation Support

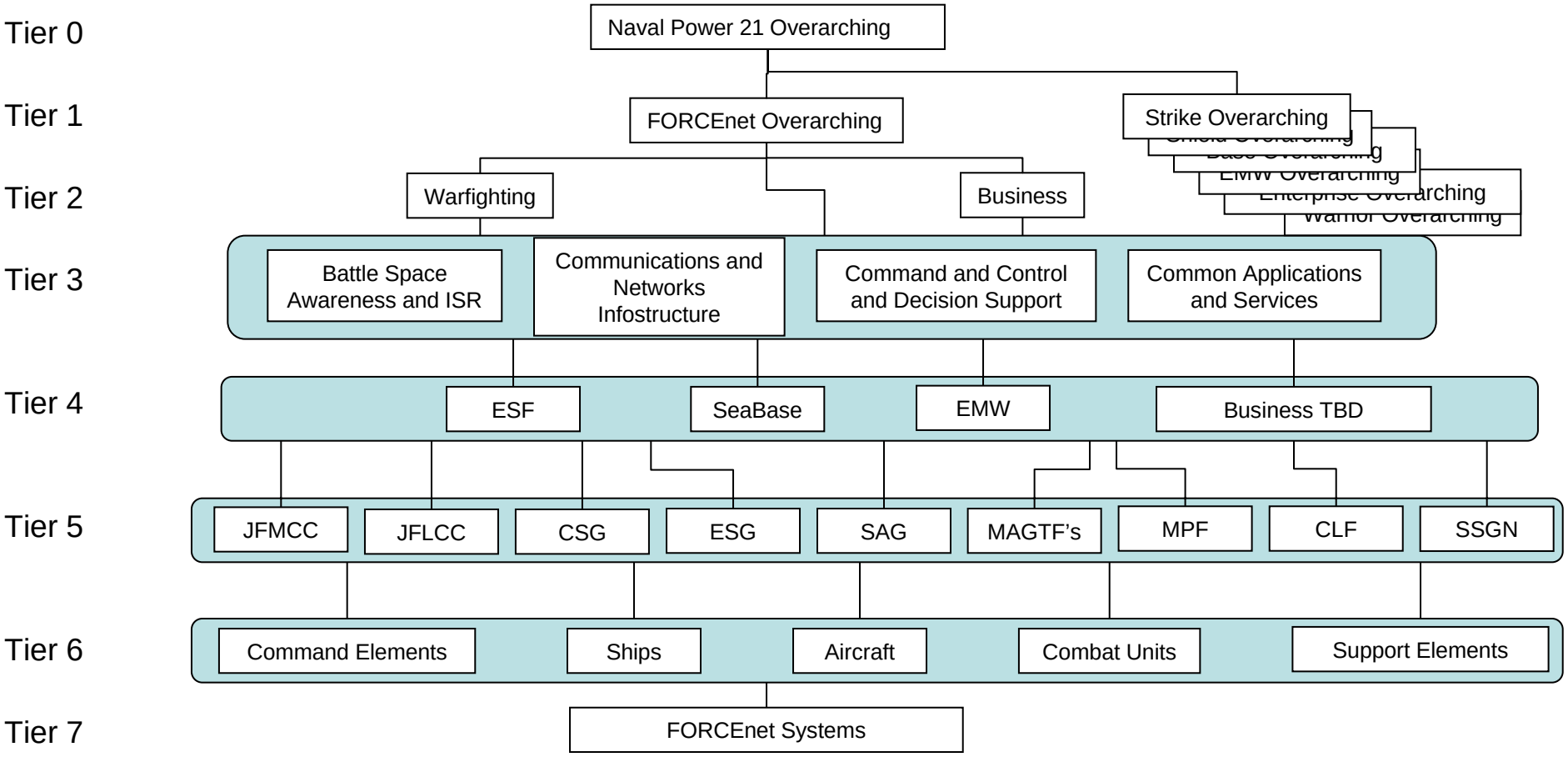
OV-1: High-Level Concept Graphic
OV-2: Operational Node Connectivity
OV-3: Information Exchange Matrix
OV-4: Organizational Relationships
OV-5: Activity Node Tree/Model
OV-6: Event Trace Diagram
FIT – FORCEnet Implementation Toolset
SME – Subject Matter Expert
MCASE – MC Arch Support Environment

Operational SME Team Review

System View (SV) Process



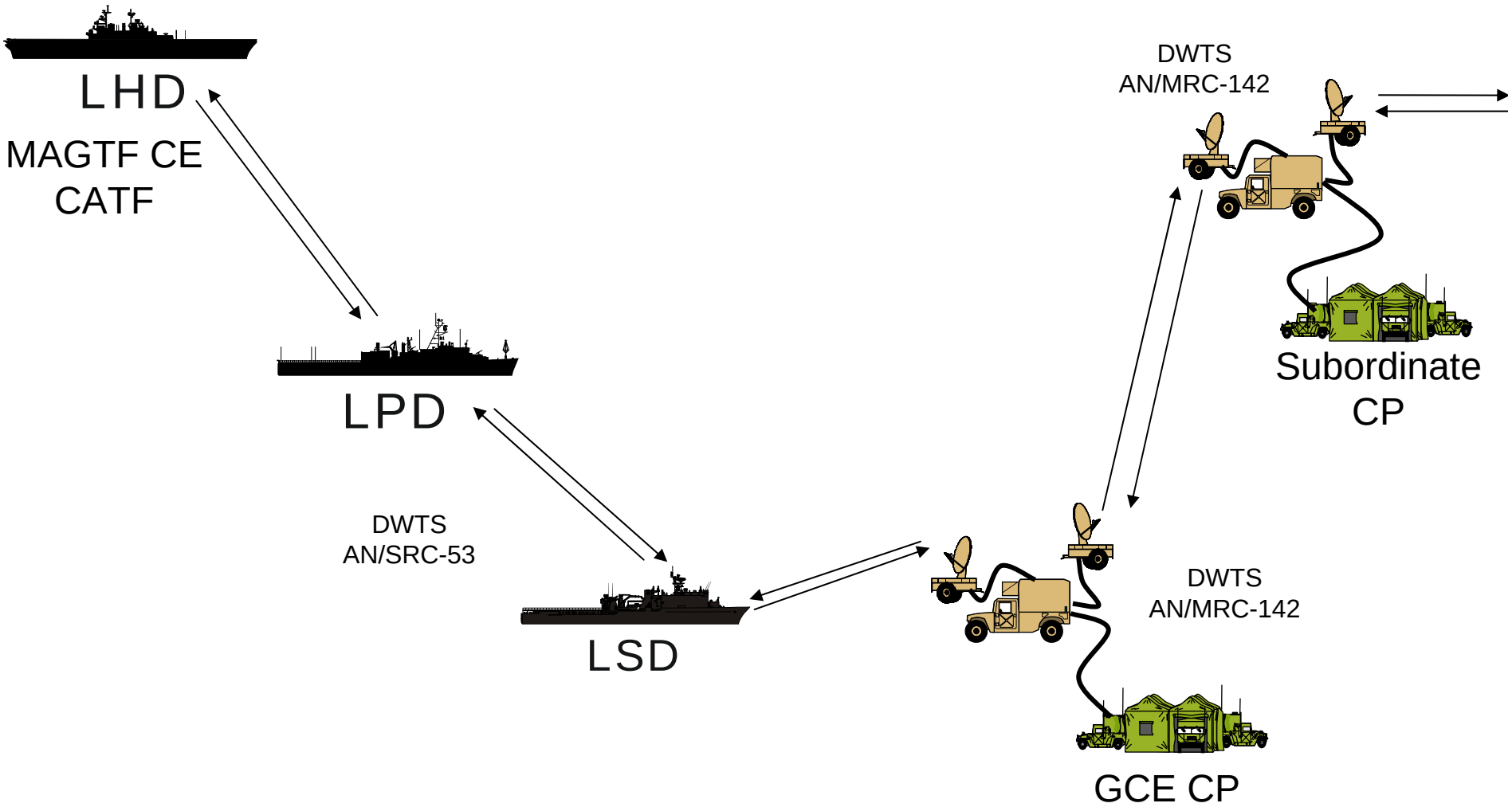
FORCEnet Integrated Architecture Hierarchy



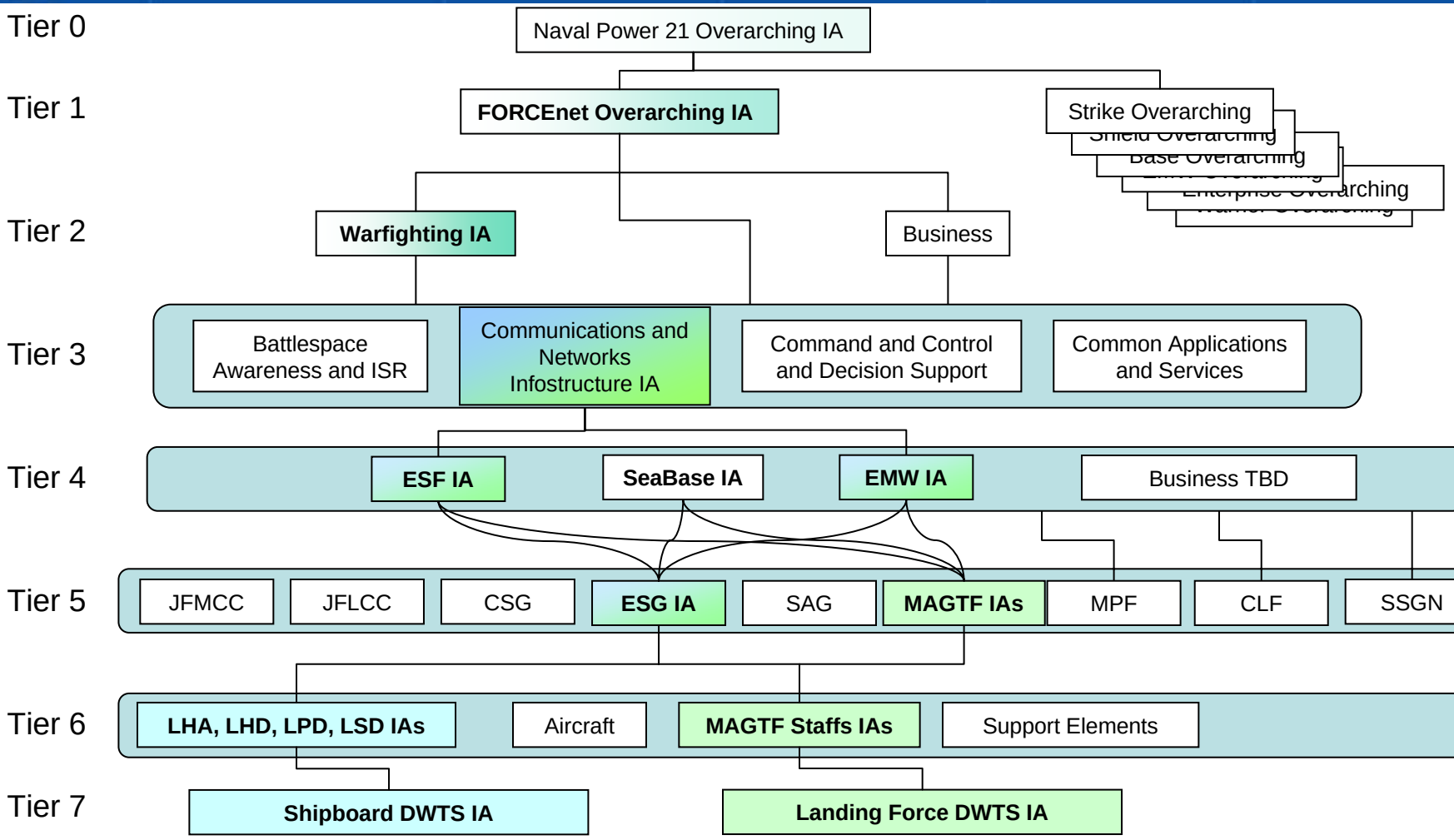
Hierarchy Example

- Digital Wideband Transmission System (DWTS)
- Full Duplex Radio System
  - Landing Force Data Communications up to 512kbs.
  - Procured by MARCORSYSCOM For Marine Corps
  - Procured by SPAWARSYSCOM for Navy

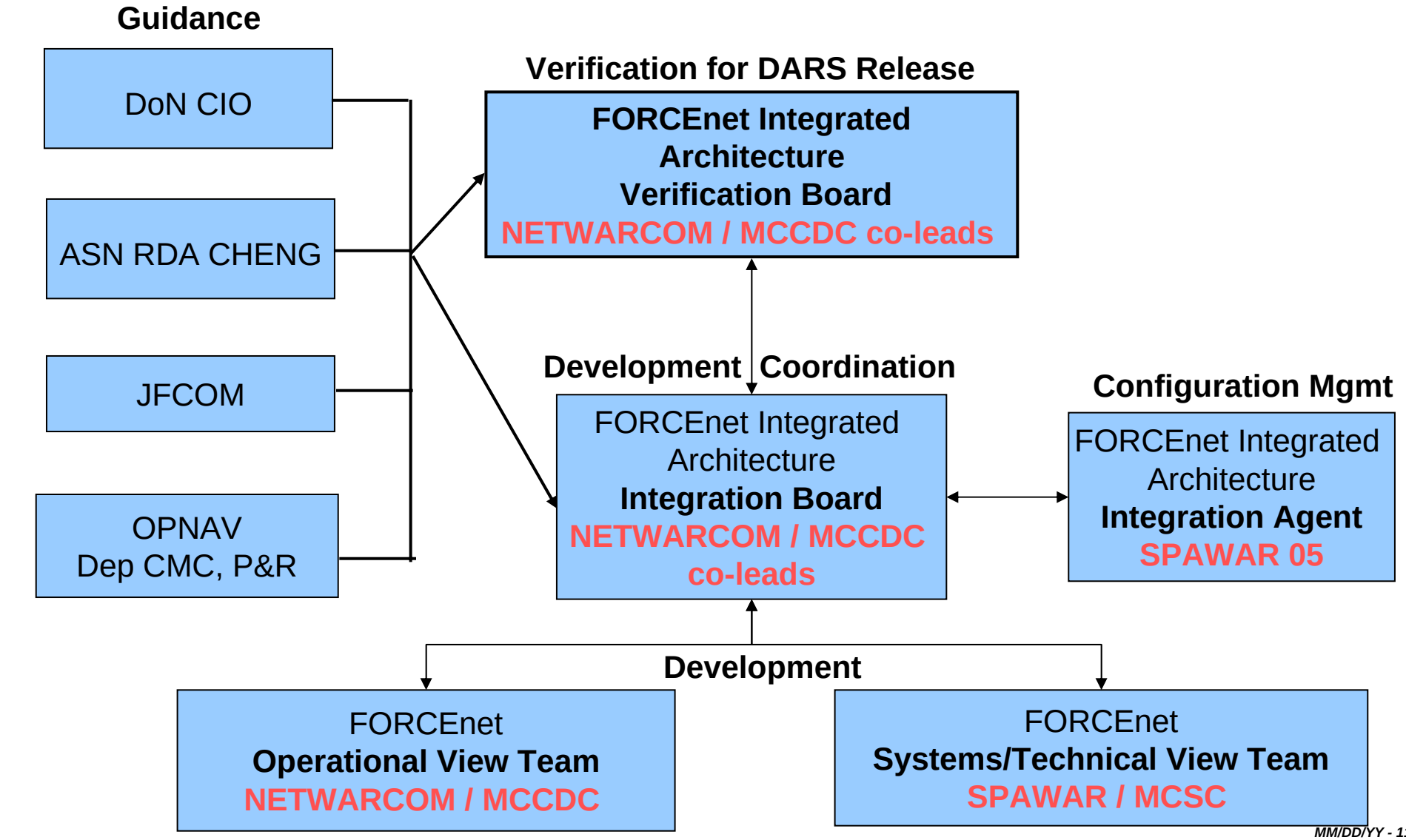
DWTS SV-1


LHD
MAGTF CE
CATF
LPD
LSD
DWTS
AN/SRC-53
DWTS
AN/MRC-142
Subordinate
CP
DWTS
AN/MRC-142
GCE CP

DWTS Capability



FORCEnet Architecture Governance

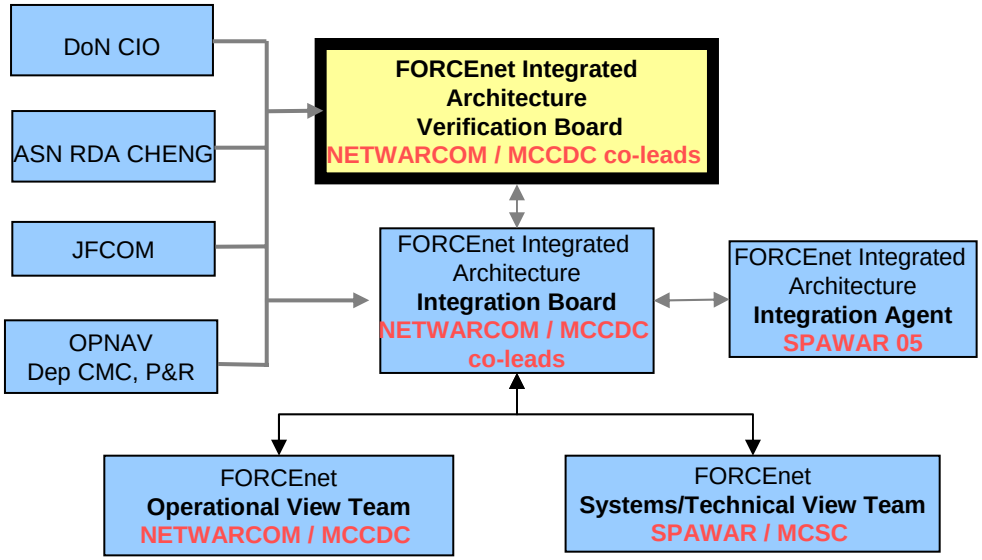


Verification Board

- Mission: Verify FORCEnet Integrated Architecture products are ready for release to the DOD Architecture Repository System (DARS)
- Evaluation Criteria:
  - Maturity
  - DODAF compliance
  - Correct representation of the FORCEnet Functional Concept and other authoritative sources
- Voting:
  - 2/3 Quorum
  - 2/3 Majority vote
- Decisions:
  - Direct product configuration management and DARS release
  - Direct additional work

Verification Board Membership

1. NNWC (Co-Chair)
2. MCCDC (Co-Chair)
3. SPAWAR
4. MCSC
5. OPNAV N71
6. OPNAV N704
7. OPNAV N20
8. NWDC
9. Dep CMC, PP&O
10. Dep CMC, P&R
11. Dep CMC, Aviation
12. Dep CMC, I&L
13. Director, HQMC C4
14. Director, Intel
15. RDA CHENG
16. DoN CIO
17. ONR



Released Views

- R 040037Z NOV 05
  - FM COMSPAWARSYSCOM SAN DIEGO CA
  - SUBJ/FORCENET ARCHITECTURE PRODUCT AVAILABILITY//

-**AV-1** (VER 1.0): OVERVIEW AND SUMMARY INFORMATION
-**AV-2** (VER 1.0): INTEGRATED DICTIONARY (DEVELOPMENT PROCESS ONLY;
-**OV-1** (VER 2.0): HIGH-LEVEL OPERATIONAL CONCEPT GRAPHIC
-**OV-2** (VER 1.0): OPERATIONAL NODE CONNECTIVITY DESCRIPTION
-**OV-4** (VER 1.0): ORGANIZATIONAL RELATIONSHIPS CHART
-**OV-5** (VER 2.0): OPERATIONAL ACTIVITY MODEL
-OV-6C (VER 1.0): OPERATIONAL EVENT TRACE DESCRIPTION (HOMELAND DEFENSE [HLD]-MARITIME DOMAIN AWARENESS [MDA])
-**OV-6C** (VER 1.0): OPERATIONAL EVENT TRACE DESCRIPTION (INTELLIGENCE SURVEILLANCE RECONNAISANCE [ISR]-TIME CRITICAL STRIKE [TCS])
-**TV-1** (VER 1.0): TECHNICAL STANDARDS PROFILE
-**TV-2** (VER 1.0): TECHNICAL STANDARDS FORECAST

- Top-Level Architecture For FORCEnet Domain Within Naval Power 21
- Supports Navy and Marine Corps
  - Analysis, Planning, Engineering, Acquisition, Contracting, Modeling, Simulation, Testing
- Available In Navy Community of Interest (COI) Section Of DARS.

Questions